IN THE CLAIMS:

1.   (Currently   Amended)   ~~A method~~ **Method** for ~~fading~~ superimposing computer-generated information into an image of the real environment detected by an image receiving unit located on a viewing device, the method comprising the steps of:

providing a robot;

providing a control unit;

providing the viewing device with the image receiving unit;

detecting an image of the real environment and detecting an image of the robot by the image receiving unit; [[and]]

displaying said robot image and said real environment image on said viewing device;

~~fading computer-generated information into the image, wherein there is a determination of~~

obtaining a position and an orientation or pose of said robot based on said robot image and said real environment image detected via the image receiving unit; ~~and that~~

obtaining robot-specific information from said robot via said control unit, said robot-specific information corresponding to information necessary for moving said robot;

superimposing the robot-specific information ~~corresponding to this determination is faded~~ over the image of said robot ~~the real environment~~ on [[the]] said viewing device, at least one robot-specific coordinate system being [[faded]] superimposed into said image of the robot and real environment; and

controlling said robot based on said robot-specific information superimposed over image

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of said robot such that movement of said robot image corresponds to movement of said robot.

2. (Canceled)

3. (Currently Amended) A ~~Method~~ method according to claim 1, wherein said robot-specific image includes a hand flange-fixed coordinate system ~~is faded in~~.

4. (Currently Amended) A method ~~Method~~ according to claim 1, wherein said robot-specific information includes robot axes ~~are faded in~~.

5. (Currently Amended) A method ~~Method~~ according to claim 1, wherein an image of a control element ~~of a robot manual programmer movable in at least two dimensions~~ is ~~faded in~~ superimposed on said robot image, said control element being movable in at least two dimensions for robot manually programmed movement.

6. (Currently Amended) A method ~~Method~~ according to claim 5, wherein an image of the control unit in association and orientation of the robot hand flange is ~~faded in~~ superimposed on said robot image.

7. (Currently Amended) A method ~~Method~~ according to claim 1, wherein at least one tool moved by a robot, preferably several robot elements are [[faded]] superimposed into said

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real ~~a working~~ environment ~~of a robot~~.

8. (Currently Amended) A method ~~Method~~ according to claim 1, wherein said robot-specific information includes a robot path to be covered by said robot in connection with a working process, particularly that of the tool center point, ~~is faded in,~~ optionally including additional information.

9. (Currently Amended) A method ~~Method~~ according to claim 1, wherein said robot-specific information includes path points ~~are faded in~~, wherein the position of the path points in space is variable and in each case a robot path curve corresponding to the position of all the path points ~~is faded in~~.

10. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the image of a workpiece to be machined by a robot, optionally together with axes associated therewith is ~~faded in~~ superimposed on said robot image.

11. (Currently Amended) A method ~~Method~~ according to claim 1, wherein for adapting a robot path to the position of a detected, real workpiece, a virtual image of the workpiece with a robot path adapted thereto is ~~faded in~~ superimposed on said image of said real environment, so that by superimposing the virtual workpiece image with the image of the real workpiece it is possible to adapt the robot path to be performed to the position of the real

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workpiece.

12. (Currently Amended) A method Method according to claim 1, wherein a working area reachable by a robot and/or a permitted operating area is visualized on the viewing device.

13. (Currently Amended) A method Method according to claim 1, wherein movement corridors of a robot tool, robot hand and/or further robot elements are visualized on the viewing device.

14. (Currently Amended) A method Method according to claim 1, wherein permanent and/or instantaneous associations of at least one manual programmer of at least one robot are visualized.

15. (Currently Amended) A method Method according to claim 1, wherein the position and orientation of the display are detected by fixed markings in space.

16. (Currently Amended) A method Method according to claim 15, wherein the position and orientation of the viewing device are determined by radio.

17. (Currently Amended) A method Method according to claim 1, wherein the position and orientation of the viewing device are determined optically.

18. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the robot-specific, computer-generated information is [[faded]] superimposed onto [[into]] data spectacles to be worn by a user.

19. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the robot-specific, computer-generated information is [[faded]] superimposed onto a transparent screen as the viewing device.

20. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the robot-specific, computer-generated information is displayed together with optoelectronically recorded information on a graphicable screen as the viewing device.

21. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the robot-specific, computer-generated information is displayed together with optoelectronically recorded information on a screen in the form of a graphicable screen of a manual programmer for a robot.

22. (Currently Amended) A method ~~Method~~ according to claim 1, wherein the robot-specific, computer-generated information is displayed together with optoelectronically recorded information on a graphicable screen as the viewing device connectable to a manual programmer for a robot.

23.   (Currently Amended)   ~~A device~~ Device for visualizing computer-generated information in an image of the real environment, the device comprising:

a robot;

~~a display of at least one robot-specific coordinate system;~~

an image receiving device; [[and]]

a viewing device connected to said image receiving device, said image receiving device detecting an image of said robot and surrounding real environment of said robot, said viewing device displaying said robot image and said surrounding real environment;[[,]]

a ~~determining~~ means for ~~determining~~ obtaining the position and orientation or pose of said robot based on said image of said robot and surrounding real environment of said robot detected via [[the]] said image receiving device; [[and]]

a control unit, said control unit receiving robot-specification information from said robot;

[[by]] a ~~fading~~ means for ~~fading the determination of~~ superimposing said ~~corresponding~~ robot-specific information over [[the]] said image of [[the]] said robot and said surrounding real environment on [[the]] said viewing device, said robot-specific information corresponding to information necessary for moving said robot, said control unit controlling said robot based on said robot-specific information superimposed on said image of said robot, whereby said robot is moved based on movement of said image of said robot.

24. (Canceled)

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25. (Currently Amended) A device Device according to claim 23, comprising a display of wherein said robot-specific information includes a hand flange-fixed coordinate system.

26. (Currently Amended) A device Device according to claim 23, comprising a display of wherein said robot-specific information includes robot axes.

27. (Currently Amended) A device Device according to claim 23, further comprising a display of the image of an operating unit of a robot manual programmer movable in at least two dimensions.

28. (Currently Amended) A device Device according to claim 27, further comprising a display of an image of the operating unit in association and orientation of the robot hand flange.

29. (Currently Amended) A device Device according to claim 23, further comprising a display of at least one tool moved by a robot and preferably several robot elements, in an operating environment of a robot.

30. (Currently Amended) A device Device according to claim 23, wherein said robot-specific information includes comprising a display of a robot path to be covered during an operating process and optionally with additional information for a robot, particularly the hand

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flange of a robot.

31. (Currently Amended) A device ~~Device~~ according to claim 23, ~~comprising a display of~~ wherein said robot-specific information includes path points with respect to a variability of the position of the path points in space and in each case a display of a position of a robot path curve corresponding to all the path points.

32. (Currently Amended) A device ~~Device~~ according to claim 23, further comprising a display of an image of a workpiece to be machined by a robot and optionally with axes associated therewith.

33. (Currently Amended) A device ~~Device~~ according to claim 23, ~~comprising a display of~~ wherein said robot-specific information includes a virtual image of a workpiece with a robot path adapted thereto for adapting the robot path to the position of a detected, real workpiece, so that by superimposing the virtual workpiece image with the image of the real workpiece it is possible to adapt the robot path' to be performed to the position of the real workpiece.

34. (Currently Amended) A device ~~Device~~ according to claim 23, ~~comprising~~ wherein said robot-specific information includes a display of an operating area reachable by a robot and/or a permitted operating area on the viewing device.

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35. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising a display of movement corridors of a robot tool, a robot hand and/or further robot elements on the viewing device.

36. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising a display of permanent and/or instantaneous associations of at least one manual programmer with at least one robot.

37. (Currently Amended) A device ~~Device~~ according to claim 23, ~~comprising~~ <u>wherein said robot-specific information includes</u> fixed markings in space for detecting the position and orientation of the display.

38. (Currently Amended) A device ~~Device~~ according to claim 37, wherein the markings are radio receivers, particularly transmitters.

39. (Currently Amended) A device ~~Device~~ according to claim 23, wherein the markings can be detected by an optical receiver.

40. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising data spectacles to be worn by a user for displaying <u>said</u> robot-specific~~, computer-generated~~ information <u>and computer-generated information</u>.

41. (Canceled)

42. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising a graphicable screen for displaying <u>said</u> robot-specific <u>information and</u>[[,]] computer-generated information together with optoelectronically recorded information.

43. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising a viewing device in the form of a graphicable screen of a manual programmer for a robot for displaying <u>said</u> robot-specific <u>information and</u>[[,]] computer-generated information together with optoelectronically recorded information.

44. (Currently Amended) A device ~~Device~~ according to claim 23, <u>further</u> comprising a graphicable screen connectable to a manual programmer of a robot as a viewing device for displaying <u>said</u> robot-specific <u>information and</u>[[,]] computer-<u>generated</u> information together with optoelectronically recorded information.

45. (New) A device according to claim 23, wherein said robot-specific information includes position of a tool center point frame, a tool contour, boundaries of a working space, axes of rotation of a plurality of robot articulations and travel speed of said robot.

46. (New) A method according to claim 1, wherein said robot-specific information

includes position of a tool center point frame, a tool contour, boundaries of a working space, axes of rotation of a plurality of robot articulations and travel speed of said robot.

47. (New) A method for superimposing computer-generated information, the method comprising:

providing a robot;

providing a control unit;

providing a viewing device;

providing an image receiving unit;

detecting an image of said robot and detecting an image of the real environment surrounding said robot via said image receiving unit;

displaying said image of said robot and said image of said real environment on said viewing device;

determining position of said robot based on said image of said robot and said image of said real environment;

obtaining robot-specific information from said robot via said control unit, said robot-specific information corresponding to one of a position of a tool center point frame, a tool contour, boundaries of a working space, axes of rotation of a plurality of robot articulations and travel speed of said robot;

superimposing said robot-specific information over said image of said robot and said image of said real environment; and

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controlling said robot based on said robot-specific information superimposed over image

20   of said robot such that movement of said image of said robot corresponds to movement of said

robot.